

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Mr. James Goepel on 8/13/2008.
4. Please replace all of the claims with the following of applicant's amended claims.
 1. (Currently Amended) A method of dynamically managing a computer system having a plurality of processors, comprising:
 - identifying a first set of computer-readable instructions;
 - identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group;
 - ~~assigning the first set of computer-readable instructions~~ application group to at least one of said plurality of processors using an affinity mask; and

automatically adjusting the number of processors assigned to said ~~first set of instructions~~ application group by adding ~~to or removing a processor to or from the~~ affinity mask based on processor usage in the system, and removing the processor ~~being removed from the affinity mask~~ based on processor usage in the system and in a reverse order that the processor is added to the affinity mask, the adjustments being made after at least the first set of computer readable instructions are elevated in priority class.

2. (Original) The method of claim 1 wherein the first set of computer-readable instructions comprise a computing thread.

3. (Original) The method of claim 1 wherein the first set of computer-readable instructions comprise an application program.

4. (Original) The method of claim 1 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

5. (Previously Presented) The method of claim 4 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions .

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method of claim 1 wherein the processor usage comprises an average processor usage taken over a predefined interval.

10. (Previously Presented) The method of claim 1 where the act of automatically adjusting the number of processors compares the processor usage to a threshold value.

11. (Previously Presented) The method of claim 10 wherein the threshold value for adding a processor is above about 85% of CPU utilization on the processors that the first set of instructions is executing on.

12. (Previously Presented) The method of claim 10 wherein the threshold value is for deleting a processor is below about 65% of CPU utilization on the processors that the first set of instructions is executing on.

13. (Currently Amended) A system for dynamically managing a computer system having a plurality of processors, comprising:

at least one processor;

a computer memory device in communication with said at least one processor bearing computer computer-executable instructions capable of identifying a first set of computer-readable instructions;

a computer memory device in communication with said at least one processor bearing computer computer-executable instructions capable of identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group;

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of assigning the ~~first set of computer-readable instructions~~ application group to at least one of said plurality of processors using an affinity mask; and

a computer memory device in communication with said at least one processor bearing computer-executable instructions capable of automatically adjusting the number of processors assigned to said ~~first set of instructions~~ application group by adding to or removing a processor to or from the affinity mask based on processor usage in the system, and removing the processor ~~being removed~~ from the affinity mask based on processor usage in the system and in a reverse order that the processor is added to the affinity mask, the adjustments being made after at least the first set of computer readable instructions are elevated in priority class.

14. (Original) The system of claim 13 wherein the first set of computer-readable instructions comprise a computing thread.

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15. (Original) The system of claim 13 wherein the first set of computer-readable instructions comprise an application program.

16. (Original) The system of claim 13 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

17. (Previously Presented) The system of claim 16 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions .

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Original) The system of claim 13 wherein the processor usage comprises an average processor usage taken over a predefined interval.

22. (Original) The system of claim 13 where the computer memory device bearing computer-executable instructions capable of automatically adjusting the number of processors is capable comparing the processor usage to a threshold value.

23. (Currently Amended) An article of manufacture comprising:
a ~~computer-readable storage medium~~ processor readable medium bearing computer-readable instructions of dynamically managing a computer system having a plurality of processors, comprising:

instructions for identifying a first set of computer-readable instructions;

instructions for identifying a second set of computer-readable instructions wherein said first set of computer-readable instructions and said second set of computer-readable instructions comprise an application group;

instructions for assigning the ~~first set of computer-readable instructions~~ application group to at least one of said plurality of processors using an affinity mask;
and

instructions for automatically adjusting the number of processors assigned to

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said ~~first set of instructions~~ application group by adding ~~to~~ or removing a processor to ~~or from~~ the affinity mask based on processor usage in the system, and removing the processor ~~being removed~~ from the affinity mask based on processor usage in the system and in a reverse order that the processor is added to the affinity mask, the adjustments being made after at least the first set of computer readable instructions are elevated in priority class.

24. (Previously Presented) The article of manufacture of claim 23 wherein the first set of computer-readable instructions comprise a computing thread.

25. (Previously Presented) The article of manufacture of claim 23 wherein the first set of computer-readable instructions comprise an application program.

26. (Previously Presented) The article of manufacture of claim 23 wherein the processor usage is based on the CPU utilization for the computer-readable instructions.

27. (Previously Presented) The article of manufacture of claim 26 wherein the CPU utilization is normalized for the CPUs in the number of processors eligible to execute the first set of instructions .

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Previously Presented) The article of manufacture of claim 23 wherein the processor usage comprises an average processor usage taken over a predefined interval.

32. (Previously Presented) The article of manufacture of claim 23 where the instructions for automatically adjusting the number of processors compares the processor usage to a threshold value.

5. Please replace paragraph 35 of the specification with the following:

[0035] Elements of embodiments of the invention described below may be implemented by hardware, firmware, software or any combination thereof. The term hardware generally refers to an element having a physical structure such as electronic, electromagnetic, optical, electro-optical, mechanical, electromechanical parts, while the term software generally refers to a logical structure, a method, a procedure, a program, a routine, a process, an algorithm, a formula, a function, an expression, and the like. The term firmware generally refers to a logical structure, a method, a procedure, a program, a routine, a process, an algorithm, a formula, a function, an expression, and the like that is implemented or embodied in a hardware structure (e.g., flash memory, ROM, EROM). Examples of firmware may include microcode, writable control store, and micro-programmed structure. When implemented in software or firmware, the elements of an embodiment of the present invention are essentially the code segments to perform the necessary tasks. The software/firmware may include the actual code to carry out the operations described in one embodiment of the invention, or code that emulates or simulates the operations. The program or code segments can be stored in a processor or machine accessible medium ~~or transmitted by a computer data signal embodied in a carrier wave, or a signal modulated by a carrier, over a transmission medium.~~ The "processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can store, ~~transmit~~, or transfer information. Examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash

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memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, ~~a fiber optic medium, a radio frequency (RF) link, and the like.~~ The computer data signal may include any signal that can propagate over a ~~transmission medium such as electronic network channels, optical fibers, air, electromagnetic, RF links, etc.~~ The code segments may be downloaded via computer networks such as the Internet, Intranet, etc. The machine accessible medium may be embodied in an article of manufacture. The machine accessible medium may include data that, when accessed by a machine, cause the machine to perform the operations described in the following. The machine accessible medium may also include program code embedded therein. The program code may include machine readable code to perform the operations described in the following. The term "data" here refers to any type of information that is encoded for machine-readable purposes. Therefore, it may include programs, code, data, files, and the like.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MengYao Zhe whose telephone number is 571-272-6946. The examiner can normally be reached on Monday Through Friday, 10:00 - 8:00 EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached at 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Li B. Zhen/

Primary Examiner, Art Unit 2194